

THE BIOLOGIST

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THE BIOLOGIST

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PHI SIGMA HONORARY BIOLOGICAL SOCIETY

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DENVER, COLORADO, DECEMBER, 1924

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THE CENTRAL GOVERNING BODY

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University of Denver, Denver, Colorado

National Vice-President

DR. LOWELL E. NOLAND

University of Wisconsin, Madison, Wisconsin

National Secretary

PROF. C. I. REED

Department of Physiology, University of Chicago

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ERWINE HALL STEWART

Mesa, Colorado

Chapter reports, alumni news and other matter for publication in

THE BIOLOGIST should be addressed to the Editor, ROBERT C. MILLER, Department of Zoology, University of Washington, Seattle.

ROLL OF ACTIVE CHAPTERS OF PHI SIGMA

ALPHA

Ohio State University.....Columbus, Ohio
Secretary, JOHN W. LARCOMB.....1733 Franklin Park, So., Columbus, O.

BETA

University of Michigan.....Ann Arbor, Michigan
Secretary, CARL ERLANSON.....711 Granger Ave., Ann Arbor, Mich.

DELTA

University of Maine.....Orono, Maine
Secretary, RUTH R. CROCKETT.....Balentine Hall, Orono, Maine

EPSILON

University of Denver.....Denver, Colorado
Secretary, JOHN S. CHAMBERS.....1541 Steele St., Denver, Colorado

ZETA

University of Wisconsin.....Madison, Wisconsin
Secretary, ANSELM KEEFE.....Dept. of Botany, U. W., Madison, Wis.

ETA

University of Akron.....Akron, Ohio
Secretary, IRENE GRIFFITH.....466 Spicer St., Akron, O.

THETA

Michigan Agricultural College.....East Lansing, Michigan
 Secretary, W. J. ROBERTS.....Dairy Dept., M. A. C., East Lansing, Mich.

IOTA

Washington University.....St. Louis, Missouri
 Secretary, MRS. EDGAR ANDERSON
Missouri Botanical Gardens, St. Louis, Mo.

KAPPA

University of Kansas.....Lawrence, Kansas
 Secretary, STELLA HARRIS.....1137 Indiana St., Lawrence, Kans.

LAMBDA

University of Montana.....Missoula, Montana
 Secretary, CATHERYN S. McRAE.....601 Daly Ave., Missoula, Mont.

MU

University of California.....Berkeley, California
 Secretary, EDWIN M. SHEARER.....Zoology Bldg., U. C., Berkeley, California

NU

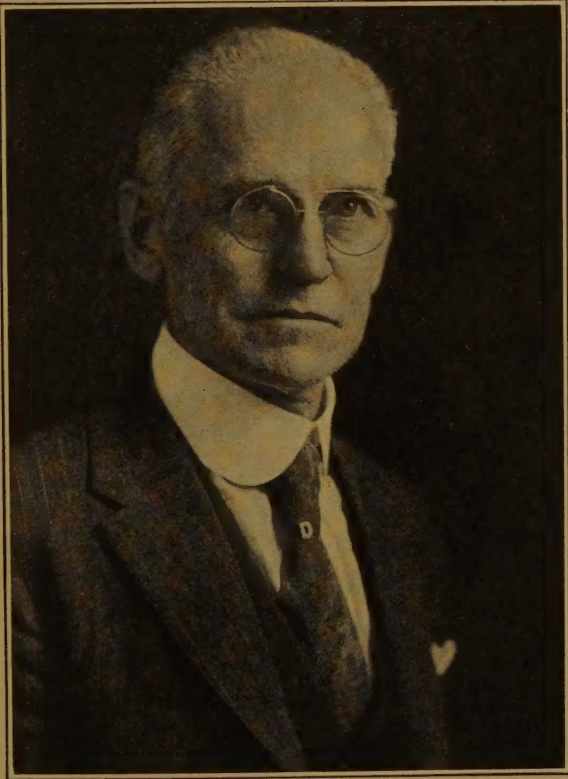
Washington and Jefferson College.....Washington, Pennsylvania
 Secretary, AUGUST SISMONDO.....418 Hayes Hall, Washington, Penn.

OMICRON

University of North Dakota.....Grand Forks, North Dakota
 Secretary, IRENE PRITZ.....Dept. of Biology, Univ. of N. Dak.

XI

University of Nebraska.....Lincoln, Nebraska
 Secretary, WALLACE BUCK.....435 N. 25th St., Lincoln, Neb.



IRA EUGENE CUTLER, Ph.D., LL.D.
Newly Elected President of Phi Sigma

PROFESSOR CUTLER CHOSEN NATIONAL PRESIDENT

Since the last issue of *THE BIOLOGIST* went to press, it has been necessary for the Central Governing Body to act in the matter of the selection of a new National President of Phi Sigma, Professor Setchell having found it necessary to resign from the office on account of the unusual pressure of work under which he is laboring in connection with arrangements for a Botanical Expedition to the South Seas, on which he expects to embark within a short time. In explanation of the situation which necessitated his resignation, a part of Professor Setchell's letter to the Central Governing Body is quoted herewith:

"This brings me to a matter which is close to my heart, and brings me to a point where I must decide definitely as to my own connection with the Governing Body. My experience of the last year has indicated to me the lack of time and immediate opportunity of assisting the progress of the Phi Sigma Society. I have been tied up practically seven days in the week with administrative teaching and research work. I am at the end of our term, Commencement having been celebrated only yesterday, feeling definitely fagged, but having nearly a month's work of detail to dispose of before I can leave. I may mention that I am going to Hawaii until the middle of August for collecting and certain other research work. In the last week or two, in making arrangements for the coming year, I find that not only will there be just as much work as there has been this last year for me to do, but that I must take over certain additional duties which will effectually preclude my leisure for what I may call outside interests.

"I am feeling therefore constrained, in the interests of the Phi Sigma Society and on behalf of my own duties to the University here, to resign as National President, and I hereby place this resignation in your hands as Secretary to communicate to the rest of the Governing Body. I do this at this time, since there is still opportunity for conducting an election, or, if the matter can not be arranged before June 1, leaving it open to the Governing Body to select or arrange for the National President for the coming year. I also send in my resignation at this time because I am preparing for a year of exploration in the South Seas, expecting or at least hoping to start upon that work about May, 1925.

"I realize that there is much to do in Phi Sigma. There is an overwhelming importance, in my mind, to the matter of

getting delegates together to consider matters of policy and of regulations, as well as of details of national and of chapter organization. As the society grows, there will be need of change. I feel that some younger man, more centrally located, can take up the work and carry it farther than myself. I am in the midst of an accumulation of things to be done before my term of active service shall be over.

"I regret taking this step. My association has been a pleasant one, but it has been coupled with a feeling that I was not giving, partly through lack of time and partly through lack of immediate opportunity, the service which the Society might properly demand from its National President.

"Trusting that I may assist in this matter in alleviating your apprehensions, and forwarding your ideals for a more vigorous and progressive national policy, and assuring you that in so far as my limited time and opportunity will allow I am always willing to serve the Society, I remain

Very fraternally yours,

(Signed) W. A. Setchell

Immediately upon receipt of Dr. Setchell's letter of resignation, the remaining officers of the Central Governing Body took his action under advisement, and after debating the matter for a long time, finally accepted his wishes and took steps to provide a successor.

After deliberation throughout the summer, a selection was recently made in the person of Professor Ira E. Cutler, of the University of Denver, who has consented to serve as National President to fill out Dr. Setchell's unexpired term.

While we regret the action of Professor Setchell, we nevertheless appreciate the motives which prompted it, and can only say that we wish our association with him had been of longer duration.

It has been the good fortune of some of the officers to know intimately the incoming National President, and we feel that he is in every way qualified to assume the responsibilities of this office.

Professor Cutler has been head of the Department of Biology in the University of Denver for some twenty-five years. He is a charter member of Epsilon Chapter, and has been closely in touch with the work of the Society almost since its beginning. Thus he is peculiarly fitted to assume the office of President at this time, and to carry on the policies and advance the interests of a now rapidly growing organization. On behalf of Phi Sigma we extend a cordial greeting to Professor Cutler as he assumes the duties and responsibilities of his new office.

IN MEMORIAM

PROFESSOR FRANK A. SPRAGG

A Member of Theta Chapter of Phi Sigma

By the untimely death, on August 12th, 1924, of Frank A. Spragg, Plant Breeder at the Michigan Agricultural College, American agriculture has been deprived of one of its most constructive workers. Though hardly in his prime, Professor Spragg already ranked as one of the greatest plant breeders of all time in the development of better varieties of field crops and forage plants. The improved varieties produced by his genius are at present widely grown far beyond the borders of his state.

The Rosen rye is recognized by the United States Department of Agriculture as the leading variety of the "corn-belt" and is an important variety in practically all northern rye growing regions.

The Red Rock wheat is recognized, in an official report of the Bureau of Plant Industry, as the best soft red milling wheat of the United States. The Berkeley Rock wheat, a recent introduction, is an improvement over the Red Rock.

The Wolverine has become the leading oat variety in Michigan and is one of the leaders of Indiana and New York State.

The Mich-2-Row barley, recently introduced, was the highest yielding of all barleys in extensive tests. The Black Barbless has met favor with those who want a smooth awned hardy barley. The White Barbless is under increase and has not yet been distributed. The Michigan Winter barley is a new development for northern states and the "corn-belt", and is the hardiest of fall planted barleys.

The Robust bean is a leader in Michigan and has been adopted as the standard white pea bean of New York. It is recognized as the best in Wisconsin, Minnesota, and other white bean growing states.

The Hardigan alfalfa is a forage and seed producing alfalfa in humid regions proving to be hardier than the Grimm. It was the forerunner of even hardier and better seed producing strains in Professor Spragg's alfalfa work.

Extensive work was substantially under way with new varieties of beets, potatoes, hemp, flax and other crops.

It will be the particular concern of members of the Farm Crops Department to see that the valuable strains, accumulated by Professor Spragg through years of careful work, are brought to the point of proper increase, and are generally distributed. The influence of Professor Spragg's great contribution to American agriculture will be cumulative in that these varieties will gain favor year after year and endure indefinitely as high yielding varieties in American agriculture. Frank Spragg, Plant Breeder, has helped many thousands of farmers in the production of better quality crops at cheaper costs. His work will go on for coming generations.

—W. J. Roberts.

THE NATIONAL CONVENTION

By C. I. Reed, National Secretary

The chapters have at last voted on the matter of the proposed National Convention of Phi Sigma in connection with the meetings of the American Association for the Advancement of Science in Washington this winter. The plan has been accepted of sending delegates from the active membership of each chapter, their *fares only* to be paid from the national treasury. Any deficit occurring in the treasury as a result of this large drain is to be made up by a special assessment on the active membership. A like provision is made for the national officers, exclusive of the editor.

Fare and one-half rates will be available from all points in the United States, and figures secured by the Secretary from the various railroads involved indicate a sum total of \$1092.98 as necessary to cover the expense. This means that the assessment should not exceed \$2.50 per active member, and may be less than that.

After consultation with the officials in charge of preparations for the Washington meeting of the American Association and affiliated societies, the date for the Phi Sigma Convention has been designated as Monday, December 29, from 9:30 a. m. to 6:00 p. m. It will be impossible to run later than this on account of the opening general session of the Association meeting beginning at 8:00 o'clock that evening. Sessions of some of the sections or affiliated societies are scheduled for every hour of every day during the remainder of the week until Saturday evening. If a longer time than that indicated is necessary to complete the business of Phi Sigma, it will be at the expense of some of the other meetings. We have asked for provisions for a luncheon Monday noon, and have under consideration a Phi Sigma Dinner at 6:00 o'clock Tuesday evening, December 30. Further details on all of these points will be furnished chapter secretaries and delegates as soon as information is available.

In view of the shortness of the time available, it is apparent that many important items cannot be dealt with directly on the floor of the convention, but must be taken care of by committees. Probably before this reaches the chapters, they will have been notified individually of the various items demanding consideration, and it is suggested that delegates come prepared to consider the most important affairs first and dispense with all unnecessary details. Also it is urged that they cooperate with the officers in eliminating from consideration in the convention such matters

as may be handled in committee or at a later date. Of course, the election of officers will be one of the most important items.

The Secretary takes this opportunity to request that he be relieved from office after the convention, and in expectation that the wish will be granted he takes occasion to express to the chapters certain things which would not ordinarily be in good form for him were he expecting to continue in office. Since these remarks have no flavor of personal reference, it is hoped that all readers will realize that they are made with a view to the future good of Phi Sigma.

In the first place, there is always a general inclination to place all responsibility for the action of a society upon its officers. At certain times and from various quarters, rather drastic criticism of the action of the national officers has been voiced, and in most instances perhaps with justification. However, it is to be remembered that the national officers have much to lose and nothing to gain by their services, which further cost them enormous amounts of time. The present Secretary feels, and he believes that the other officers share in that feeling, that his duties as Secretary are sometimes neglected, not from carelessness or lack of interest or due sense of responsibility, but because it is humanly impossible to do all that is demanded of him in connection with Phi Sigma, and at the same time carry on his own personal affairs. The time devoted to Phi Sigma now amounts to approximately an hour and a half every day during the school year. The chapters have at times protested, not without some reason, against the multiplication of expenses. Yet, unless chapter secretaries and chapter officers in general are willing to take more responsibility and display greater efforts in cooperation, it is going to be absolutely necessary to provide financial remuneration to the Secretary in future. It is highly unfair to make demands upon any man's time such as are at present made in connection with the secretaryship.

In electing a new Secretary, then, it must be taken into account that, in order to carry on the necessary work in a satisfactory manner, the chapter officers will have to give better cooperation than most of them have done in the past. Phi Sigma belongs to every individual member just as much as to the National Officers, and every individual's responsibility is just as great. If they fail to realize that, it is fair to assume that they have largely wasted their time in becoming members.

REPORT OF THE NATIONAL TREASURER

The following report covers the period from January 1, 1924 to June 1, 1924.

GENERAL FUND

Receipts:

Cash on hand Jan. 1, 1924.....	\$ 28.97
Received from initiation fees.....	195.97
Charter fees	50.00
Sale of blanks and copies of the constitution.....	13.75
Total	\$259.72

Expenditures:

To Biologist fund.....	\$ 8.00
Chapter installations	72.75
Expenses of the Nat. Secretary's office.....	64.51

Total	\$145.26
Balance on hand June 1, 1924.....	114.46

Total	\$259.72
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BIOLOGIST FUND

Receipts:

Cash on hand Jan. 1, 1924.....	\$292.41
Received from G. A. A. No. 2.....	142.00
Biologist subscriptions	64.00
Advertising	40.00

Total	\$538.41
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Expenditures:

Printing Vol. 5, No. 2 of the Biologist.....	\$ 94.52
Printing Vol. 6, No. 1 of the Biologist.....	138.26
Binding File and loose leaf binders.....	8.42
Editorial expense	10.20

Total	\$251.40
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Balance on hand June 1, 1924.....	287.01
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Total	\$538.41
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KEY FUND

This report shows the surplus accumulated for the last two years.

Receipts:

Received for the purchase of keys.....\$799.06

Expenditures:

Paid jeweler for keys.....\$687.70

Balance on hand June 1, 1924.....\$111.36

Erwine Hall Stewart, National Treasurer

KEYS

Standard Size (official)

Swivel ring top.....\$5.50

Stationary ring top.....5.00

Mounted as a pin.....6.25

Miniature Size (small)

Swivel ring top.....\$5.00

Stationary ring top.....4.50

Mounted as a pin.....5.50

When ordering always be sure to state the name of the member for whom the key is ordered, the chapter he belongs to and the year of his initiation. Last but not least send ALL orders to the National Treasurer.

Both sizes of the membership record blanks are sold at two cents each. This price does not entirely pay for the cost of printing and mailing.

Membership Certificates are issued by the National Secretary without any charge being made, while the membership record blanks are distributed by the National Treasurer. Order accordingly.—*E. H. Stewart, National Treasurer.*

CHAPTER REPORTS

BETA

University of Michigan

Beta Chapter, due to the untiring efforts of the officers and fine support of the members, enjoyed a very successful year. During the past year semi-monthly meetings have been held. The plan has been to have a faculty member talk at one meeting while at the other some active member gives a discussion on some topic of his own selection. These meetings have been very instructive and interesting.

This past year we have started a project which we hope will serve as a reward for greater effort put forth in the departments of Botany and Zoology. This reward is a copy of Darwin's *Origin of Species* or some other biological classic to be given to the undergraduates doing the best work in these departments.

At the fall initiation Beta Chapter was exceedingly fortunate as well as honored by having the pleasure of initiating as faculty members Doctor F. G. Novy who is Professor of Bacteriology at the University, and Professor H. B. Lewis who is Professor of Physiological Chemistry at the University. Doctor Novy, among his many honors, has been awarded the Nobel Prize and was recently elected Chevalier of the French Legion of Honor. Professor Lewis is likewise one of the foremost workers in his field.

Thirteen active members were taken in at this initiation. Doctor E. W. Sink, former national president, gave a talk on the "History of Phi Sigma," and Mr. L. R. Dice talked on "The Place of the Museum in Science."

At the spring initiation Beta Chapter was again fortunate to initiate as faculty members: Professor Robt. Gasell, Professor of Physiology; Doctor A. L. Johnson, Professor of Orthodontia; and H. H. Clum, who is now Professor of Botany at the University of Porto Rico. Eight active members were initiated at this time. Doctor Emerson and Professor Lewis were the speakers for the evening. It was at this initiation that the presentation of Darwin's *Origin of Species* was made. This year the undergraduate to receive the volume in the Botany Department was Mr. C. O. Erlanson, while in the Zoology Department the book was presented to Mr. R. R. Enders.

Beta Chapter has thirty active members and is looking forward to one of its best years.—*R. H. Kingery, D.D.S.*

DELTA

University of Maine

Under the leadership of our new president, Raymond Burton, Delta Chapter looks forward to the most successful year ever.

Instead of "hibernating" during the summer months, several members of Delta chapter were hard at work on various phases of biological interest. The new Biological Laboratory at Bear Harbor founded by Dr. C. C. Little, president of the University and an honorary member of Delta chapter, harbored no less than seven Delta members during the months of July and August. Raymond Burton, Arthur Cloudman, Ruth Crockett, Phillip Harriman, Mary Harris, Beatrice Johnson, and Howard Reiche, were all there. In other words, we were about 60% Phi Sigma. This summer work under the direction of President Little, proved most interesting and valuable. Special problems were assigned each student, but the general object of the work was to classify the flora and fauna of the Island by a study of certain regions which previous investigators had designated as having distinct types of growth. We wish we could tell you in more detail of the interesting work we did there.

Mr. Joseph Murray, another member of Delta chapter, has been carrying on a series of experiments to determine the effect of ultra-violet radiation on the general metabolism of animals, with special attention to bone formation.

Chickens were used as material for orientation experiments. From X-Ray photographs, growth curves, and mortality tables, interesting results have been obtained in showing the relation between the disease, leg-weakness ("rickets" in the mammals) and the amount of ultra-violet light received during the early period of growth.

Fifteen minutes exposure to a quartz mercury vapor arc lamp at a distance of three feet prevented the appearance of leg weakness and brought about a more rapid ossification at the ends of the long bones, especially in the legs, than did the exposure to direct sun light during the whole day. Chicks kept under the same conditions as the radiated chicks but with only glass filtered sunlight developed leg-weakness which brought about a high mortality before the age of ten weeks.

Other experiments are now in progress to determine the effect of this radiation on mammals, plants, and different species of bird.

The effect on fertilization, egg production, etc., are also being observed. A full account of the experiment will be published in a University of Maine Bulletin.

Delta Chapter is also proud to have several of its graduate members back this year working for the Master's Degree. Miss Johnson, Mr. Cloudman, Mr. Harriman, and Mr. Reiche have all returned to the University for this purpose.

Next Tuesday we start the ball rolling by a public exhibition of the work accomplished at Bar Harbor, as well as that of the local work of the Society. All the faculty are invited, and Phi Sigma members are to give talks on various subjects.

Delta chapter will also undertake the rearrangement of the Natural History Museum as part of its program for the year.

In short, the opportunities for activity prophesy a busy year for Phi Sigma on the University of Maine Campus.—*Ruth R. Crockett, Secretary.*

EPSILON

University of Denver

Epsilon Chapter is still holding its meetings twice a month, either at the University or at the home of one of the members. The evening is devoted to discussion of one biological topic, and the speaker is thus able to go into considerable detail in his report. The meetings have been extremely interesting.

We are planning now to award each year a bronze medal to the student at the University of Denver who submits the best paper on some phase of biology. A certificate of honorable mention will be given to the writers of the papers ranking second and third.

The annual expedition of the Colorado State Historical and Natural History Society for 1924 was a great success. The party was in charge of Mr. J. A. Jeancon, Curator of Archaeology and Ethnology at the State Museum in Denver. Mr. Jeancon is a member of Epsilon Chapter. Frank H. H. Roberts, also a member of Epsilon, was a member of the party.

The expedition covered over 3500 miles, mapping the archaeological ruins of western and southwestern Colorado. A great deal of new information was gained, and some excellent material was brought in.

Epsilon Chapter feels highly honored that our own Dr. Cutler has been made National President of Phi Sigma. Both he and Mr. Stewart, the National Treasurer, are charter members of Epsilon.

Dr. Etienne B. Renaud, Professor of Anthropology at the University of Denver, returned last July from Europe, where he had spent the preceding academic year in archeological research. He was with the British Museum and the Royal Academy of

surgeons in England, carried on studies at the Crouser Beds on the east coast, and visited Sussex, with Dr. Smith Woodward. He worked through Belgium and Holland, but centered most of his attention on southwestern France. A part of the time Dr. Renaud was with Dr. Hrdlicka of the United States National Museum, and Dr. Dubois of Brussels.

Frank H. H. Roberts, who has been instructing in Archaeology at the University of Denver, has obtained a research fellowship in Archaeology at Harvard University.

Dr. T. R. Garth is continuing his research in connection with the intelligence of the American Indian. He is at present recovering from a serious operation, and we are looking forward to the time when he will be with us in the meetings again.

I. Neal Rice is teaching Chemistry at Holyoke, Colorado.

Lee A. Dugdale is teaching in Toledo, Ohio.

Frank Gemar, president of Epsilon Chapter last year, is with the U. S. Public Health Service at the Marine Hospital in New Orleans. He expects to do some research in the Bacteriology Laboratories of Tulane University.

George A. Dale is principal of the high school at Strassburg, Colorado. He expects to enter Medicine in the near future.

Owen P. Cutler is now in Utah.

Morgan A. Durham has entered the School of Medicine at the University of Colorado.—*John Stanley Chambers, Secretary.*

ETA

University of Akron

The first regular meeting of the year was held October 9. Various committees were appointed by our new president, Mr. Karam. Eta is planning to carry out the same idea in regard to programs this year as last. Printed programs are given to all members. These contain the programs for the entire year, with the name of the person in charge, also the subject for current discussion.

No new members were taken in last semester, but the chapter had 14 active members returning to school this semester. New members will be considered later in the year.

Dr. Kraatz, a new professor at Akron University this year, is Phi Sigma from Ohio State, and Wisconsin.—*Irene M. Griffiths, Secretary.*

THETA

Michigan Agricultural College

As yet this chapter has not held a meeting this year, but the

first one of the year will be held on Oct. 23. At this time the following new officers will assume charge of the chapter: President, R. W. Weaver; Vice President, Kenneth Ousterhout; Secretary, W. J. Roberts. The plans and policies for this year will be outlined and discussed. Messrs. F. H. Black and W. B. Jones have agreed to give a discussion of their research problems. An attempt will be made to follow this plan throughout the year, giving as many members as possible an opportunity to discuss their particular research problems. Thus we will know what our members are doing in their attempt toward the advancement of science. There are some very interesting experiments being conducted by the members of this chapter and it is felt that such a program will prove to be very interesting as well as instructive.

The last meeting for the year 1923-24 was held June 4. The officers named above were elected for this year. Five active members were voted into the fraternity as follows: Fred H. Black, B. S., Graduate Assistant in Farm Crops; Wright B. Jones, B. S., Graduate Assistant in Dairying; Kenneth Ousterhout, B. S., Graduate Assistant in Farm Crops; George E. Taylor, B. S., Graduate Assistant in Dairying; Karl Dressel, B. S., Graduate Assistant in Forestry.

Immediately after the initiation, a banquet was served at the Hunt Food Shop in honor of the new members. Dr. H. R. Hunt acted in the capacity of toastmaster. The first speaker was Dr. C. C. Young of the State Department of Public Health. He gave a very instructive talk on "The Use of Vaccination in Combating Diseases." The discussion of smallpox vaccination proved to be very interesting, since there was an epidemic of smallpox in the community at the time.

The new members were represented by Mr. G. E. Taylor, who pointed out the necessity on the part of the experimenter for the constant search for the truth, not allowing himself to be influenced by his own ideas.

The enrollment of the active members of the chapter has been greatly decreased due to the fact that several members received their advanced degrees at the end of last year. However, several of these men are now connected with the college staff, and will still be associated with the chapter.

It is the policy of Theta chapter to take in only members who have completed their undergraduate work, and since the graduate school at Michigan Agricultural College is steadily growing the prospects for a bright future are very good for this chapter.

J. R. Cole is with the Government Experiment Station at Thomasville, Ga.

W. H. Thies is Extension Specialist in Horticulture at Massachusetts Agricultural College, Amherst, Mass.

H. H. Wedgeworth is doing plant disease work with the State Plant Board at The A. & M. College, Miss.

H. M. Wells is with the Horticultural Experiment Station at Grand Rapids, Mich.

E. P. Lewis is with the Chicago branch of the University of Illinois Experiment Station.

D. Stewart is taking work toward a Ph.D. in Botany at Cornell University.

D. Swartz is with the Botany Department of the University of Cincinnati, Cincinnati, Ohio.

R. J. Weldon is with The Arctic Dairy Products Co., Detroit, Mich.—*W. J. Roberts, Secretary.*

IOTA

Washington University

Last year closed with grand eclat for Iota Chapter. Under the auspices of the society, Mr. Stedman of St. Louis lectured on his trip to Africa for big game, filling the auditorium at the Medical School and netting \$101.50 for the Wood's Hole scholarship fund. The scholarship this past summer was awarded to Miss Florence Heys, of the Department of Zoology.

Two of our last year's officers received the doctor's degree in June—Miss Mildred Trotter and Mr. Carl C. Epling.

At the last regular meeting of the year the following officers were elected for the current year: Miss Margaret Sumwalt, president; Mr. Lawrence Goldman, vice-president; and Mrs. Edgar Anderson, secretary-treasurer.

A number of prospective new members are available this fall, and we are anticipating an interesting and profitable year.—*Dorothy M. Anderson, Secretary.*

KAPPA

University of Kansas

Kappa Chapter got away to a running start this year, and has already had three meetings. Interest is stronger than it ever has been, and we have all hopes of maintaining it throughout the year. We have adopted a new plan for conducting our meetings. They are held at 5:30 every second Thursday afternoon, and a dinner is served on trays. After the meal business is taken up and speakers are introduced. Another feature of our new plan is to have the head of each department of the Biological sciences present the general scope of the research being

carried on in his particular field, and the recent advances. On evening is given to each department. Thus far Dr. Hungerford (Entomology), Dr. Coghill (Anatomy), and Dr. Tinx (Botany) have spoken.

We find that our tray dinners are working wonders toward fostering a spirit of good fellowship and interest. We hope to elect new members at our next meeting.—*Stella Whiffin Harris*
Secretary.

LAMBDA

University of Montana

Lambda Chapter can look forward to an exceptional year if this can be estimated by the number of enthusiastic Phi Sigma members who have returned this fall.

Our president, Opal Adams, by negotiations with Chancellor Brannon, made it possible for an autumn banquet, at which the Chancellor spoke to the chapter members on "Some Relations of Water to Biological Functions." At this time Chancellor Brannon was initiated into Phi Sigma as an honorary member, Dr. Bateman as a faculty member, and Arthur Cramer, May Cramer, and Annie McClay as student initiates.

All the future ambitions and plans of the chapter were formulated and discussed at our gathering, and there were interesting and enlightening talks as well. Dr. Elrod and Dr. Kirkwood gave short addresses on the subjects: "The Spirit of Phi Sigma" and "The Work of Phi Sigma." With this incentive we are intending to accomplish great things this coming year.

We all miss the aid of our former members, who are now engaged in various occupations.

Gordon Reynolds and Persis Mathews are busily employed in pedagogical work.

In Missoula, we have Dorothy Phelps, anaesthetist for Dr. Phelps, and Elizabeth Egleston, laboratory technician of the Western Montana Clinic.

Many have moved far away from us. Nelma McClay is employed in the Mayo Clinic, and Frances McKinnon as a student assistant dietitian in the Presbyterian Hospital in New York City.

Sam McLay and Marjorie Moore are both within a few miles. Sam is in Helena working as an assistant in the State Laboratory; and Marjorie is assistant laboratory technician at Warm Springs, Montana.

Otis Benson has accepted a scholarship in Biochemistry at the University of Iowa.

"Work without end" seems to be the motto of our faculty

members. Each one has been engaged in some particular avocation during the summer months. The growing interest toward animal life in Glacier Park is due largely to Dr. Elrod. He has held the position of Park Naturalist for three years, making the park interesting and understandable from a scientific standpoint. This year Dr. Elrod is responsible for the first Park Guide Book of over 300 pages and 100 illustrations. This book will no doubt be the standard for years in the future.

One who always brings an inspiration and new incentive to Phi Sigma and the Biology Department is Mr. Owen. He is not disappointing us this year. During the vacation period he visited the various Biology Departments in the Universities of Minnesota, Wisconsin, Kentucky, and Chicago, also Northwestern University and Vanderbilt University. We will undoubtedly profit from his observations.

In Missoula Mr. Stempert instructed in Biology during the summer session. In addition to this he did research work along several lines.

Mr. Severy also did research work in the Botanical Laboratory on enzymes of the Bitter Root. This subject is still holding his attention and we are all expecting unusual results.

Mr. Graff investigated timber diseases on Striker Ridge.

Dr Kirkwood has been doing some botanical exploration in the Bitter Root Mountains and Clearwater region of Idaho. This is the first attempt at a systematic study of flora of that region. His work involved the study of the kinds of plants and their distribution in relation to exposure, altitude and climate.—
Catheryn S. McRae, Secretary.

NU

Washington-Jefferson College

With the closing of the college year 1923-24 last June, Nu chapter terminated a very successful and constructive series of programs.

Under the presidency of Mr. Malcolm, each meeting proved to be a program devoted to current business, review of recent biological literature, open discussion and an occasional invited speaker. The spring election and banquet at the George Washington Hotel climaxed the social activities. Mr. Hawkins, a newly initiated member, read a paper on the life of Louis Pasteur.

Upon reviewing the minutes of the past year, I find the following as a partial list of the papers presented: The Biogenetic Law as Applied to Man, Phytopathology as an Economic Science, and an illustrated lecture on Plant Geography by Dr.

O. E. Jennings, Professor of Botany at the University of Pittsburgh.

Biological research and study has received another impetus at Washington and Jefferson College by the establishment of the Linton Memorial Endowment at the Marine Biological Laboratory, Woods Hole, Mass.

The department, under the leadership of Dr. G. W. Martin has made some material changes and is looking forward to another very successful year.

Mr. Dieter, an instructor in the department, has received the degree of Master of Science. His thesis work was done with *Crenothrix polyspora*, a species of iron bacteria. He also spent the last summer studying at the University of Chicago in the Department of Pathology and Bacteriology.

With the election of officers, initiation of new members and the outlining of the programs for the ensuing year at the next meeting, Nu chapter will be ready to open another year of its existence at W. & J. College—*August Sismondo, Secretary.*

OMICRON

University of North Dakota

In the spring of 1923 members of the biological seminar of the University of North Dakota, feeling the need of an organized group of advanced biological students, met in business session and formed an honorary society, *Phylon*, with the intention of petitioning for membership in Phi Sigma.

On May 9, 1924, our petition was granted and on May 26 Dr. L. E. Noland, our national vice-president, installed Omicron chapter at the University of North Dakota. On the evening of our installation we met in the banquet room of the Frederick hotel with John Schauer, president of *Phylon*, presiding. Dr. Young and Dr. Baird of the University faculty spoke, a short musical program was given after which the installation took place. Dr. Noland's visit was greatly enjoyed by all and we regret that he could not remain with us longer.

The first meeting of Omicron chapter and the last meeting of the year was held on the picnic grounds near Arvilla, North Dakota, June 9. Officers elected were: President, P. M. Shunk; Vice-president, Ralph Finkle; Secretary-treasurer, Irene Pritz.

Our chapter held its first meeting of the current year on Monday, October 13 at which committees were appointed and plans made for the year.

Omicron Chapter sends a cordial salutation to the older members of the society. We are proud of the little start we have made and we hope to do great things.—*Irene Pritz, Secretary.*

XI

University of Nebraska

Late in March, 1924, the members of the Zoology Society, University of Nebraska, were rejoiced to learn of their acceptance of a chapter of Phi Sigma. Plans were at once set on foot to insure a fitting installation and the date of April 26 was agreed upon with Prof. C. I. Reed, who was to be our installing officer. A banquet was arranged for at the Lincoln Hotel on the evening of the twenty-sixth, and all the new and hopeful Phi Sigmas congregated early, wearing white, green and yellow ribbons. Keys had been ordered for all, but of course were not ready for delivery. The festive table was temporarily saddened by the announcement from the toastmasters chair of the illness and unavoidable absence of Professor Reed. Joy returned on the promise of his arrival the following Saturday and the merriment went almost unslackened.

Speeches were made by the head of the department of Zoology, Dr. Robert H. Wolcott and the head of the department of Botany, Dr. R. J. Poole. Greetings were expressed by three faculty members who are members of older chapters, Dr. P. B. Sears, Mr. Don B. Whalen and Mr. E. F. Powell. Letters and telegrams from many chapters were read. All the initiates were instructed to wear their pledge ribbons during the ensuing week and to appear for installation and initiation May third, 1924. Professor Reed arrived in Lincoln about noon of the appointed day and spent most of the day conferring with the officers of the new chapter and members of the University faculty.

At three o'clock in the afternoon the members met in the Zoology Building, called after Nebraska's great botanist, Bessey Hall.

The simple impressive installation and initiation and the inspiring talk which followed will long be remembered by all who were present. Not even the knowledge of the excellent nutritive material which awaited us on adjournment of the formal meeting could reconcile us to have Professor Reed close his discourse. Our meeting with Professor Reed impressed us all with a high respect for the Central governing body and with deep affection for him.

Six additional members were initiated during the month of May and the following officers were chosen to serve during the coming year: President, John A. Cameron; Vice-president, Raymond H. Swallow; Secretary-treasurer, Wallace Buck.

The present school year finds us with an active chapter of eighteen and a faculty list of nine.

Meetings are held on the first and third Thursdays of each

month. Suggestions and communications from other chapters are invited.—*Wallace Buck, Secretary.*

BALFOUR—THE EMBLEM KING

We take pleasure in reprinting from the *Sigma Chi Quarterly* for February-March, 1924, the following interesting account of the origin and growth of the L. G. Balfour Company, Official Jewelers to Phi Sigma, and indeed to a large majority of fraternities in the United States:

Honest fraternity badges at honest prices have made the L. G. Balfour Co., of which Lloyd G. Balfour, Indiana 1907, president, the largest emblem manufacturing business in the world.

Although Mr. Balfour wears a Sigma Chi pin over his heart he is responsible for nine out of every ten badges to be seen on any college campus in America. Either of his two factories at Attleboro, Mass., is at least three times as large as any other factory devoted exclusively to college fraternity jewelry.

Indeed a remarkable accomplishment for a man who defied that age-old superstition about Friday the Thirteenth.

Mr. Balfour, or "Bally," as he is known throughout the entire fraternity world, started the L. G. Balfour Co. in a 30-foot loft on June 13, 1913. While at Indiana University he had seen the great field that existed for school and college insignia, and upon graduation he traveled the East as a salesman for a jewelry house. On a visit to Attleboro, Mass., he was impressed with the field for emblem manufacturing. One big concern was operating there, but it appeared to be slipping rapidly and the end was in sight. Mr. Balfour saw the handwriting on the wall, and he grasped the opportunity. He sought out some traveling companions and with a total capital of less than \$5,000 he established the factory on the most superstitious day of the year.

For a time it seemed as if "Old Lady Luck" were running true to form. On the day of the opening there was less than \$100 left in the firm's treasury. Three men were employed in the factory; all men of recognized ability in emblem making. Mr. Balfour took the line out, making inexpensive jumps around Massachusetts, Rhode Island, Connecticut and later the rest of New England, but things didn't seem so good. It was late September before the first order came in, and the profit in that was small. It had been nip and tuck to keep the business alive, but he had the courage and even the realization that the first year's business was a money loser failed to slow him up. In fact he drove harder. Then the worm turned.

During that discouraging year the company improved its line, and 1914 found one of the best and most complete exhibits of insignia on the market. With the push of Balfour it could not fail. Orders that came in were filled, shipped out C. O. D., or on a thirty-day basis, and the returns grew. More salesmen, carefully trained and instructed by Mr. Balfour, were put on the road and the greatest sales system of the jewelry world was launched.

Balfour quality and Balfour principles built up a business that doubled each year. The sales for 1923 passed the two million dollar mark. Today 53 salesmen cover all colleges and preparatory schools in the United States, so great is the demand for Balfour-made goods. Large stocks for immediate distribution are kept at branch offices at Pittsburgh, Richmond, Indianapolis, and San Francisco. A Canadian factory is in prospect.

In ten years the floor space of the Balfour plant has grown from 30 square feet to 30,000 square feet. The payroll has increased from \$90 per week to \$10,000 per week. More than 400 skilled workmen are employed as compared with three in 1913.

The Balfour Company believes that the fraternity badge representing as it does high purposes and friendship, should in every respect be a worthy symbol of the fraternity ideals for which it stands. The design should be uniform, the heraldry correct, the craftsmanship perfect, the metals of full weight and of standard fineness, the jewels genuine. An honest badge, fully guaranteed by its maker, is its first ideal.

At least ninety percent of both men and women's fraternities have adopted the L. G. Balfour Co., as sole official jeweler.

It was not luck, it was not a sudden boom of business that has made the L. G. Balfour Co. the undisputed leader in its field. It was just courage of the good old-fashioned kind, plus energy, plus aggressiveness and plus the fact that L. G. Balfour is a man of wonderful personality, determination and alive to take advantage of every "break," to grasp every opportunity and make the most of it.

PHI SIGMA OFFICIAL KEYS

Approved design, workmanship, and quality

Emblem of Membership in Phi Sigma
Society

Manufactured by

L. G. BALFOUR COMPANY

ATTLEBORO

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SOLE OFFICIAL JEWELERS TO PHI SIGMA

Leading College Fraternity Jewelers in U. S. A.

